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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/367,778	08/18/1999	PETER LIGGESMEYER	P99.0101	4756

21171 7590 07/14/2003

STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

TSAI, CAROL S W

ART UNIT	PAPER NUMBER
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2857

DATE MAILED: 07/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/367,778

Applicant(s)

LIGGESMEYER, PETER

Examiner

Carol S Tsai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 May 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 22 May 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-11 are rejected under 35 U.S.C. 102(a) as being anticipated by U. S. Patent No. U. S. Patent No. 5,831,853 to Bobrow et al.

With respect to claims 1 and 8-11, Bobrow et al. disclose a method for computer-supported error analysis (see col. 2, lines 41-50) of at least one of sensors (sensors 56' and 58' shown on Fig. 2) and actuators in a technical system (see col. 10, lines 10-13), the error analysis being in a form of a status finite description (see col. 2, lines 47-57 and col. 5, lines 59-62) that exhibits statuses of the technical system, the method using a computer, comprising the steps of: a) determining a status-finite description of the technical system for an error case of an error of at least one of a sensor and an actuator in the technical system (see col. 1, lines 14-34; col. 1, line 62 to col. 2, line 10; col. 2, lines col. 5, lines 37-62; and col. 9, lines 16-30); b) determining a first set of achievable statuses for the technical system without errors; c) determining a second set of achievable statuses for the technical system having an error forming a difference set from the first set and the second set; and e) determining result conditions from

the difference set, the result conditions meeting prescribable conditions (see col. 5, lines 1-62 and col. 15, line 50 to col. 17, line 6).

As to claim 2, Bobrow et al. also disclose method steps a) through e) being implemented for all possible errors of sensors and actuators in the technical system (see col. 2, lines 48-50; col. 5, lines 1-28; and col. 7, lines 55-67).

As to claim 3, Bobrow et al. also disclose failure probabilities being allocated to the sensor and in which the error analysis ensues taking the failure probabilities into consideration (see col. 9, lines 24-30).

As to claim 4, Bobrow et al. also disclose method steps b) and c) ensuing according to a method of model checking (see col. col. 2, lines 18-27 and col. 5, lines 1-11).

As to claim 5, Bobrow et al. also disclose a status-finite description of a process implemented by the technical system (see col. 1, lines 14-34; col. 1, line 62 to col. 2, line 10 col. 5, lines 59-62; and col. 9, lines 16-30).

As to claim 6, Bobrow et al. also disclose the status-finite description being realized by a finite automat (see col. 2, lines 51-56 and col. 5, lines 59-62).

As to claim 7, Bobrow et al. also disclose the status-finite being a form of a binary decision diagram (see col. 32, lines 33-38).

### ***Response to Arguments***

4. Applicant's arguments filed 05/22/2003 have been fully considered but they are not persuasive.

Applicant argues that Bobrow et al. is not directed to "error analysis", because the words

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“error” or “errors” occur only five times in Bobrow et al. The Examiner disagrees with Applicant. Applicant’s claimed invention is directed to a method for determining two sets of achievable statuses, one without errors and one having error in order that technical system can be controlled properly despite the error(s), whereas Bobrow et al. disclose identifying a desired state of the subsystem, wherein the desired state is the state the subsystem is in for proper operation of the subsystem; identifying the desired state further includes identifying undesirable states of the subsystem wherein the undesirable states are those which will result in damage to the subsystem; and driving the system from any one of the states of the system towards the desired state (goal condition). (see col. 2, lines 18-64 and col. 5, lines 37-58; Using the constructed configuration space, the labeled transitions, the **identified desired state and identified undesirable states**, a program is generated 69. The generated program drives the system from any state towards the desired state, avoiding the undesirable states); therefore, Bobrow et al.’s reference is analogous to Applicant’s claimed invention. In addition, the words “error” or “errors” can be interpreted in many different terms that are synonymous to “error” or “errors”, such as mistake, miss, problem, damage, fault, failure, undesired, and etc., being well known in the art. As set forth above, Bobrow et al. do disclose a method for computer-supported error analysis (see col. 2, lines 41-50) of at least one of sensors (sensors 56’ and 58’ shown on Fig. 2) and actuators in a technical system (see col. 10, lines 10-13), the error analysis being in a form of a status finite description (see col. 2, lines 47-57 and col. 5, lines 59-62) that exhibits statuses of the technical system, the method using a computer, comprising the steps of: a) determining a status-finite description of the technical system for an error case of an error of at least one of a sensor and an actuator in the technical system (see col. 1, lines 14-34; col. 1, line 62 to col. 2, line 10; col. 2, lines col. 5, lines

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37-62; and col. 9, lines 16-30); b) determining a first set of achievable statuses for the technical system without errors; c) determining a second set of achievable statuses for the technical system having an error forming a difference set from the first set and the second set; and e) determining result conditions from the difference set, the result conditions meeting prescribable conditions (see col. 5, lines 1-62 and col. 15, line 50 to col. 17, line 6).

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Contact Information***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. Tsai whose telephone number is (703) 305-0851. The examiner can normally be reached on Monday-Friday from 7:30 AM to 4:00 PM. If attempts to

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reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703) 308-1677. The fax number for TC 2800 is (703) 308-7382. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2800 receptionist whose telephone number is (703) 308-1782.

In order to reduce pendency and avoid potential delays, Group 2800 is encouraging FAXing of responses to Office actions directly into the Group at (703) 308-7382. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2800 will be promptly forwarded to the examiner.

Carol S. Tsai

07/07/03

  
MARC S. HOFF  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800